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## Prosumer-oriented Relationship Management Capability Development for Business Performance

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### Abstract

In an always changing environment, companies must strive for business excellence. Corporate performance is determined by a firm's resource endowment and the organizational effectiveness at converting these resources into capabilities. In this line of reasoning the present paper outlines current consumer trends which give way to new CRM extensions like the Prosumer-oriented Relationship Management (PoRM) model. Prosumers are new creative consumers who participate in corporate activities and co-create value. Their innovative potential must be nurtured and enabled by adequate tools and processes. We propose five clusters of conceptual patterns for PoRM with the final purpose of converting them alongside other intellectual capital resources in PoRM capabilities for competitive advantage.

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### 1. Introduction

The resource-based view (RBV) and the capabilities-based perspective argue that performance is determined by a firm's resource endowment and the organizational effectiveness at converting these resources into capabilities [1]. If a resource can be defined as a firm's asset, knowledge and business processes for the implementation of a strategy, capabilities refer to corporate abilities to assemble, integrate, and deploy resources in combination to achieve a competitive advantage [2]. Therefore, resources alone are not always sufficient to provide performance gains. Thus they must be transformed into distinctive capabilities which are created by deploying technological resources in combination with other complementary organizational resources [3].

These technological and organizational resources clearly define a company's intellectual capital, the "intellectual material - knowledge, information, intellectual property, experience that can be put to use to create wealth" [4]. This intellectual capital uses and transforms resources in capabilities for final market outputs, drawing the line between success and failure. And success is achieved when the three intellectual capital's components work together: the human, structural capital and customer capital.

Human capital refers to employee capabilities to create value in an organization, structural capital summarizes organizational philosophy, structure, systems, processes and intellectual properties and customer or relational capital represents the relationships with relevant stakeholders. These components are interrelated and they cannot exist one without the other.

The structural capital, besides envisaging the corporate culture and organizational structure, represents also the information system with all organizational hardware and software investments [5], from which the most important for boosting customer satisfaction and retention is represented by Customer Relationship Management (CRM) technology. CRM applications link front office (sales, marketing, customer service) and back office (financial, operations, logistics and human resources) functions with the company's customer "touch points" – Internet, e-mail, call centers, sales stores, advertising [6]. CRM integrates touch points around a common view of the customer [7].

With the recent quantum shift referred to in literature as relationship marketing [8] and [9]'s idea regarding the intelligent partnership between producers and consumers materialized in [10]'s co-creation model, the firm-customer interaction changed. The common view of the customer changed. CRM changed.

Customers have begun adopting social media applications to connect with peers and demand the same level of interactivity with companies [11]. Thereby, [3] argue that social media technology needs to be integrated with CRM processes to form a firm-level capability with the final purpose of influencing business performance.

If [12]'s "social customer" gave way to an extended perspective of social CRM capability, [13]'s "prosumer" reemerged, extending the CRM model to a Prosumer-oriented Relationship Management (PoRM) approach [14].

The present paper offers a literature review of recent CRM extensions, PoRM conceptual patterns for the PoRM model and a PoRM capability representation for business performance.

## 2. Consumer tendencies and CRM extensions

While firms have always sought to hear the "voice of the customer", customers have traditionally tended to play a passive role as recipients of the firm's activities [15]. Earlier CRM technology was therefore seen as the ability to collect and analyze data on customer patterns, the interactivity with the customer was limited to maintenance and call centers. Consumers were information providers and CRM facilitated customer-firm impersonal interaction.

While the consumer role evolved due to the empowerment of the Internet and Web 2.0 applications into the social customer, CRM systems merged with social media technology, giving way to a new social CRM. This concept incorporates a more collaborative customer-centric and network-focused approach to managing customer relationships [3]. In more depth, social CRM represents "the *integration of customer-facing activities*, including processes, systems, and technologies with emergent *social media applications to engage customers* in collaborative conversations and enhance customer relationships [12].

If the traditional CRM was especially focused on consumer interaction, social CRM makes an important step towards consumer engagement. And as [15] argued, an organization which engages its customers "doesn't only deliver superior results but also adapts and responds nimbly in a competitive environment".

The final step in CRM extension is represented by the PoRM model [16], and implicitly the prosumer concept. Prosumers are the new generation of knowledgeable consumers who are *not only engaged* in corporate activities *but also creative* enough to make consumer contributions to open innovation projects [17]. Thereby the PoRM model is envisaging consumers as "creative agents" [18] who have an "innovative potential" especially when they form brand communities [19]. This last CRM extension adds some PoRM specific patterns to social CRM for facilitating consumer creative engagement, because prosumers are indeed empowered consumers who entail creative engagement characteristics very useful for corporate objectives.

These CRM extensions are outlined in Figure 1.

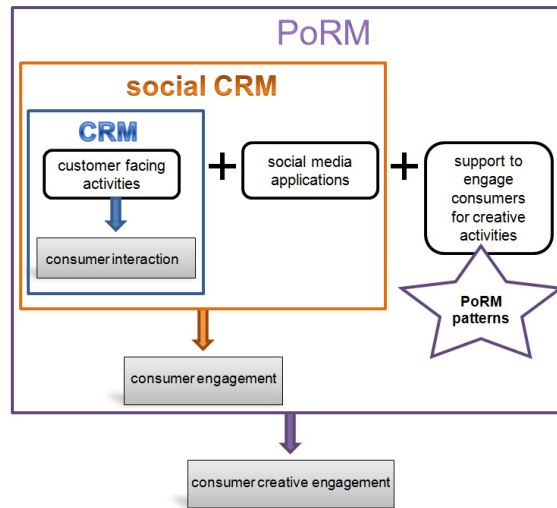


Fig.1. CRM extensions over time.

Consumer's creativity determines the productive thinking so necessary for today's urge for innovation. Studies are advocating the need to actively involve customers with new product and service development [20] because user involvement makes ideas for new products more original and enhances their perceived value by users [21]. Therefore, it is demonstrated that by integrating these new consumers – prosumers in new product or service processes, firms can achieve a wide range of benefits such as: superior quality, development or improvement of products and services, rapid diffusion of innovation, free ambassadorship and many others [22].

We suggest that the PoRM model requires PoRM patterns to develop adequate capabilities for business performance. Thus we propose a general list of conceptual PoRM patterns which will set in motion all intellectual capital resources for PoRM capability formation (Figure 2).

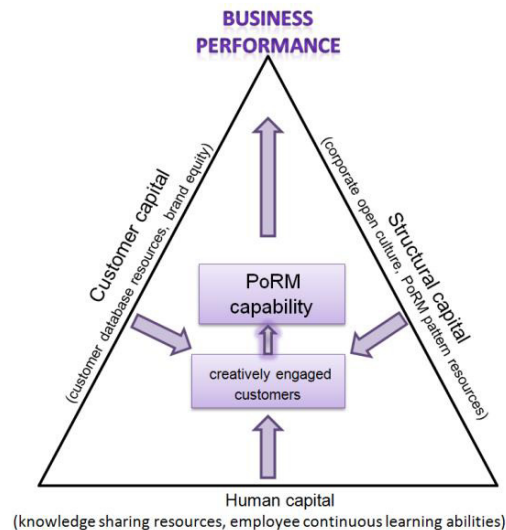


Fig.2. PoRM capability developed with the help of intellectual capital resources collaboration

### 3. PoRM patterns

In the present paper we use the pattern concept as an abstract specification of elemental user interaction requirements[23]. We have chosen to structure the PoRM model into five clusters of conceptual patterns for prosumer creative engagement in order to understand their evolution and facilitate their applicability(Fig. 3):

- information management (traditional CRM patterns)
- attract members (engagement and social CRM patterns)
- community support (sustainability patterns)
- collaboration support (sharing and communication patterns)
- creation support (creativity enabling patterns)

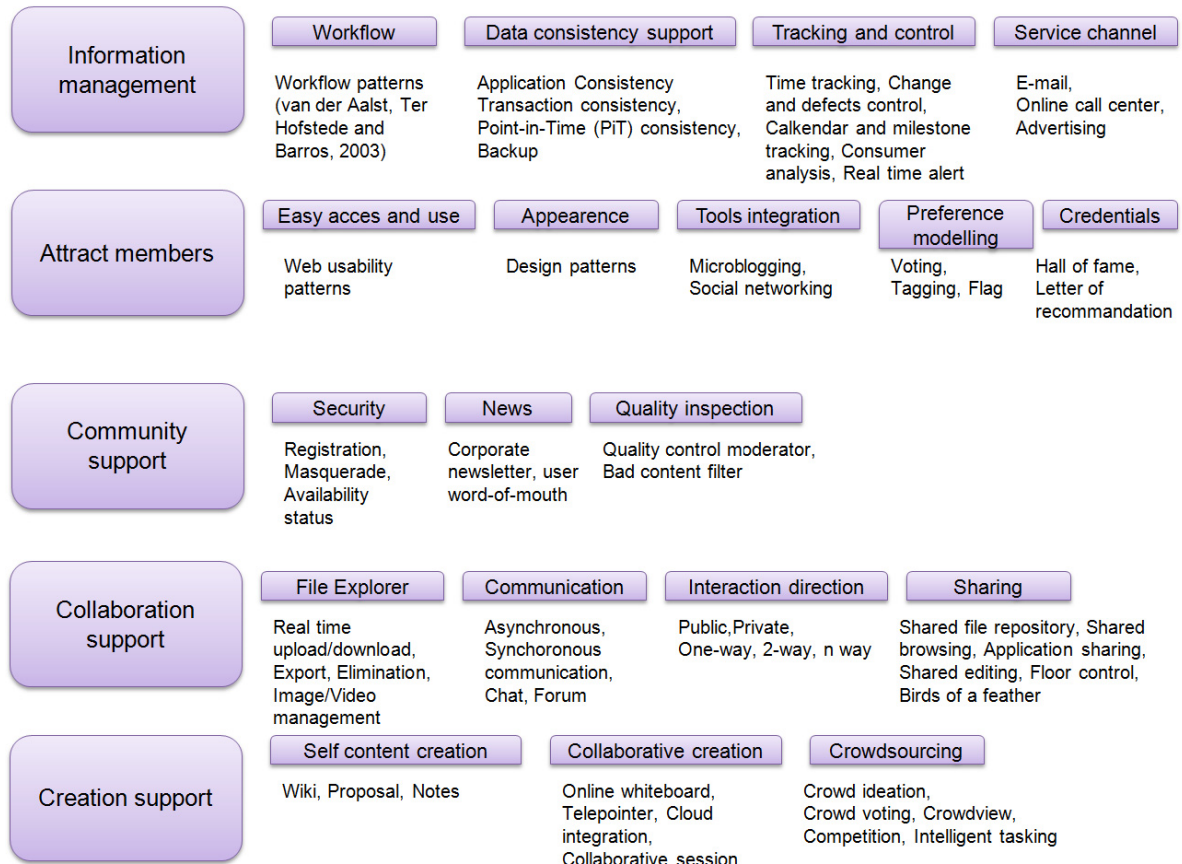


Fig.3. Cluster of conceptual PoRM pattern sources for PoRM capability

#### Information management

The first cluster of conceptual patterns represents the base technology of the traditional CRM domain. It offers customers a *service channel*, a touch point to front office departments like: e-mail, online call centers, advertising, a *tracking and control* functionality with time tracking, change and defects management, consumer analysis, real time alert, and many others, a *workflow* with systematic organization of resources into information processes, and *data consistency support*, which ensures that users observe a valid and accurate data anytime during visible changes.

#### Attract members

The next three clusters envisage the major shift of social CRM. This cluster supposes primarily setting up an online community around a business. We must take into consideration the fact that before users will participate in a community; it has to be of interest to them. And the involvement hurdle is strongly related to the principle of boundaries. The user does not become involved unless all the hurdles are overcome. Therefore, the company must use several conceptual patterns with the final purpose of overcoming the involvement hurdle. *Easy access and easy use* through linking the community to the official website and paying attention to the ease of use for all users not only the most knowledgeable of them is one of the most important ones. More web usability patterns were developed by [23]. *Appearance* issues attract visually consumers [24], *tools integration* refer mainly at social media accounts correlation with the specific brand or corporate community interests. If you have posted a new comment to a product, it is extremely convenient to share it on Facebook for example.

Because people are intrinsically motivated by reputation and opinion giving, we can attract members to our community by offering *credentials* (honor the most helpful and active participants in the system by showing them in a list, possibility of users to rate each other), and *preference modeling*. This last conceptual pattern refers to offering users the possibility to vote, flag important content or tag subjects of interest.

### *Community support*

Community support represents a constant watch for user interest in participation and a desire to meet all security and quality needs. Therefore, providing *news* for the community is vital. Even if these news are about projects, company success, new products and services or prosumer proposals, news maintain interest and participation over time. In online communities we have also problems of privacy and self-control. There is always the dilemma that members of the community, on the one hand have to reveal their identity, but on the other hand often feel a need to control how this information is used [25]. Depending on the context and company objective, the *security* issue can take many forms (minimal participation possible without registration, masquerade-have control over private information, availability status), but in all circumstances we must protect our users and avoid the privacy discrepancy. Regarding *quality control*, we especially refer to removing bad or inadequate content and also destructive members.

### *Collaboration support*

For collaboration to succeed, we need communication. Depending on the context, *communication* can take an asynchronous or a synchronous form. The synchronous communication happens in real time and requires parties to participate simultaneously and the asynchronous communication is not time or space dependant, becoming the most used in online communities. Even if we are talking in the same time or in other time frames, a very useful toll is represented by chat or forum, where prosumers and consumers are able to interact and share their opinions.

Users interact by two or more; the *direction of the interaction* is decided by the purpose of their collaboration. In the same manner, their collaboration can be public or private. Yet no communication or interaction is enough for collaboration to occur. *File exploration* is vital. All files - text, image, audio or video need to be exported, eliminated, uploaded or downloaded for the *sharing* to begun.

Sharing represents the main support for collaboration and it is extremely difficult to manage because usually group members come from a context in which they worked more or less independently. The lens which aligns their paths for the collaboration to take place is represented by the use of adequate tools with perfectly aligned functions. Individual users establish a common focus by contributing their background on tools and artifacts. In asynchronous communication, users retrieve a shared artifact from a shared file repository. In synchronous interaction we can use application sharing to replicate user interface. Also shared editing allows users to edit shared data simultaneously and floor control lets only one user at a time act in the shared collaboration space. The Sharing conceptual patterns are based on several computer-mediated interaction patterns proposed by [25].

### *Creation support*

This last but most important cluster of conceptual patterns defines the recent CRM extension into the PoRM model. If some technologies have identified engagement patterns for the social consumer, creative oriented conceptual patterns have the ability to change the CRM framework [14]. It is time for consumers to become proactive in co-creating value. They can take initiatives only enabled by information technology resources.

We have identified three main conceptual patterns for a creative output: self-content creation, collaborative creation and crowd sourcing patterns or tools. Self-content creation represents ideation and creation of content (text,

images, audio, and video) by a single individual. It entails no collaboration, thus note taking or a wiki page modification is accurate and helpful. Proposals may become future collaboration shared artifacts. Collaborative creation resides on the above collaboration pattern with several other tools and facilities. If sharing enables the transmission of data, creation requires original contribution through ideation and work. Both ideation and work can be done collaboratively in a faster and quality manner by using collaborative sessions and interactive creations tools as whiteboards. At last crowd sourcing conceptual patterns are a perfect way to creatively engage prosumers as individuals or groups in different corporate activities like: crowd voting, crowd ideation or intelligent tasking.

#### 4. Conclusion

Literature determines business performance by the level of resources a firm possesses and organizational effectiveness in converting them into capabilities for competitive advantage. The present conceptual research envisages the CRM extensions depending on customer tendencies, defining a new PoRM approach. We define PoRM capability as the organizational ability to assemble and integrate all human, structural and customer capital resources in order to creatively engage customers in corporate activities for transforming them into prosumers, external partners to open innovation [20]. Therefore, prosumer innovative potential can only be nurtured and developed by an adequate collaborative culture and tools. Because there was no clear determination on which tools are better suited for prosumers (structural capital resources), the present paper considered as necessary to propose five clusters of conceptual patterns for future prosumer-interaction artifacts. But future research envisages conceptual recommendations regarding the human and customer capital most efficient resources for developing PoRM capability.

#### References

- [1] Day G.S. The capabilities of market-driven organizations. *Journal of Marketing* 1994;58(4):37-52.
- [2] Rapp A., Trainor K.J., Agnihotri R. Performance implications of customer-linking capabilities: Examining the complementary role of customer orientation and CRM technology. *Journal of Business Research* 2010;63(11):1229-36.
- [3] Trainor K.J., Andzulis J., Rapp A., Agnihotri R. Social media technology usage and customer relationship performance: A capabilities-based examination of social CRM. *Journal of Business Research* 2012;67:1201-08.
- [4] Stewart T.A. Intellectual Capital. *The New Wealth of Organizations*. USA:Currency Doubleday; 1997.
- [5] Izvercian M., Seran S.A., Buciuman C.F. Transforming usual consumers into prosumers with the help of intellectual capital collaboration for innovation. *International Journal of Information and Education Technology* 2013;3(3):388-92.
- [6] Fickel L. Know your customer. *CIO Magazine* 1999;12(21):62-72.
- [7] Eckerson W., Watson H. *Harnessing Customer Information for Strategic Advantage: Technical Challenges and Business Solutions*. Special report the Data Warehousing Institute. CA:Chatsworth; 2000.
- [8] Grönroos C. From Marketing Mix to Relationship Marketing: Towards a Paradigm Shift in Marketing. *Management Decision* 1994;32(2):4-20.
- [9] Lewis D, Bridger D. *The Soul of the New Consumer. Authenticity – What We Buy and Why in the New Economy*. London:Nicholas Brealey Publishing; 2001.
- [10] Prahalad C.K., Ramaswamy V. *The Future of Competition: Co-Creating Unique Value with Customers*. Harvard Business School Press; 2004.
- [11] Berthon P.R., Pitt L.F., Plangger K, Shapiro D. Marketing meets Web 2.0 social media and creative consumers: Implications for international marketing strategy. *Business Horizons* 2012;55(3):261-71.
- [12] Greenberg P. The impact of CRM 2.0 on customer insight. *The Journal of Business and Industrial Marketing* 2010;25(6):410-19.
- [13] Toffler A. *The Third Wave*. Bantam Books; 1980.
- [14] Izvercian M., Seran S.A. An Extended CRM model: Prosumer-oriented Relationship Management Tools and their Functionalities. *Applied Mechanics and Materials* 2013;411-414:2391-94.
- [15] Sawhney M., Verona G., Prandelli E. Collaborating to Create: The Internet as a Platform for Customer Engagement in Product Innovation. *Journal of Interactive Marketing* 2005;19(4):4-17.
- [16] Band W., Guaspari J. Creating the Customer-Engaged Organization to link with customers, marketers must first cross the action gap. *Marketing Management* 2003;12(4):34-39.
- [17] Fuller J., Bartt M., Ernst H., Mühlbacher H. Community based innovation: How to integrate members of virtual communities into new product development. *Electronic Commerce Research* 2006;6(1):57-73.
- [18] Nuttavuthisit K. If you can't beat them, let them join: The development of strategies to foster consumer's co-creative practices. *Business Horizons*.

- [19] Verona G., Prandelli E., Sawhney M. Innovation and Virtual Environments: Towards Virtual Knowledge Brokers. *Organization Studies* 2006;27(6):765-88.
- [20] Chesbrough H.W. Open innovation: The new imperative for creating and profiting from technology. Harvard Business School Press; 2003.
- [21] Magnusson P.R. Benefits of involving users in service innovation. *European Journal of Innovation Management* 2003;6(4):228-38.
- [22] Enkel E. et al. Minimizing market risk through customer integration in new product development: learning from bad practice. *Creativity and Innovation Management* 2005;14:425-37.
- [23] Molina P., Melia S., Pastor O. JUST-UI: A User Interface Specification Model. In: CADUI 2002; France: Valenciennes.
- [24] Gamma E., Helm R., Johnson R., Vlissides J. Design patterns: Abstraction and Reuse of Object-oriented Design. *Lecture Notes in Computer Science* 1993;707:406-31.
- [25] Schümmer T., Lukosh S. Patterns for Computer-Interaction. England: John Wiley & Sons Ltd 2007.